

DERWENT-ACC-NO: 1991-075451

DERWENT-WEEK: 199803

COPYRIGHT 1999 DERWENT INFORMATION LTD

TITLE: Sweetening of petroleum cuts - by catalytic oxidn. on fixed bed

INVENTOR: ANSQUER, P; MAROY, P ; MARTY, C ; ORGEBIN, J M ; ORGEBIN, J

PATENT-ASSIGNEE: ANSQUER, P MAROY, P MARTY, C ORGEBIN, J M ORGEBIN, J TOTAL  
RAFFINAGE DISTRIBUTION SA[COFR] , CIE RAFF DIST TOTAL[COFR] ,  
ORGEBIN J M[ORGEI]

PRIORITY-DATA: 1989FR-0011781 (September 8, 1989)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 416979 A	March 13, 1991	N/A	010	N/A C10G 027/10N/A N/A N/A N/A
DE 69031644 E	December 4, 1997	N/A	000	N/A C10G 027/10
CA 2024834 A	March 9, 1991	N/A	000	
FR 2651791 A	March 15, 1991	N/A	000	
ZA 9006770 A	June 26, 1991	N/A	000	
JP 03174493 A	July 29, 1991	N/A	000	
US 5069777 A	December 3, 1991	N/A	007	
EP 416979 B1	October 29, 1997	F	010	

DESIGNATED-STATES: BE CH DE ES FR GB IT LI NL BE CH DE ES FR GB IT LI NL

CITED-DOCUMENTS: US 3686094

## APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
EP 416979A	N/A	1990EP-0402387	August 29, 1990
DE 69031644E	N/A	1990DE-0631644	August 29, 1990
DE 69031644E	N/A	1990EP-0402387	August 29, 1990
DE 69031644E	Based on	EP 416979	N/A
FR 2651791A	N/A	1989FR-0011781	September 8, 1989
ZA 9006770A	N/A	1990ZA-0006770	August 24, 1990
JP 03174493A	N/A	1990JP-0239775	September 10, 1990
US 5069777A	N/A	1990US-0579820	September 10, 1990
EP 416979B1	N/A	1990EP-0402387	August 29, 1990

INT-CL (IPC): B01J031/22, C07B061/00 , C10G027/10 , C10G029/00

ABSTRACTED-PUB-NO: EP 416979A

## BASIC-ABSTRACT:

A method for the sweetening of petroleum cuts, in the presence of an oxidising agent, is claimed. The process entails catalytic oxidation of the mercaptans in the presence of a fixed bed support impregnated with a metallic chelate and in the absence of an aq. base. The water content of the support is held between predetermined values dependent on the solvent power of the charge in the support and the temp. The temp. of the charge is fixed at a value sufficient to dissolve the water resulting from transformation of mercaptane to disulphides.

ADVANTAGE - The invention has the following advantages: the process does not use a base or caustic soln. in the charge and effluents; the water produced in the reaction is entrained in the petroleum charge itself; thus there is need for costly drying processes or dessicant in the catalyst bed; the reaction temp. used is higher than in previous processes thus giving improved kinetics and enabling a continuous process to be effected; the sweetening process is carried out in a homogeneous phase, avoiding formation of gums and reducing washing and maintenance costs.

ABSTRACTED-PUB-NO: EP 416979B

## EQUIVALENT-ABSTRACTS:

A process for sweetening a petroleum fraction in the presence of an oxidising agent, by catalytic oxidation of the mercaptan contained therein, in the presence of a support, in a fixed bed, impregnated with a metal chelate, said process being characterised in that the sweetening reaction is carried out in the absence of a strong soluble base, and in that the temperature of the charge being higher than 30 degrees C, the water content of the support is measured and if this content deviates from a set value comprised between 0.1 and 50 % by weight of the support and, preferably, between 1 and 25 % by weight thereof, the charge temperature is raised or, respectively, lowered with a view to lowering the water content of the support or, respectively, to increasing it so as to restore it to the set value.

US 5069777A

To sweeten a petroleum fraction by catalytic oxidation of mercaptans in it, the fraction is contacted with an oxidising agent in the presence of a fixed catalyst bed formed of a support impregnated with metal chelate and in the absence of any aqueous base. The water content of the support is kept in a range in which the catalyst is effective to convert mercaptans to disulphide by manipulating the net water solvency power of the feedstock and regulating feedstock temp. to solubilise the water of reaction.

The chelate is pref. selected from metal phthalocyanines, porphyrins and corrins, and the support is selected from activated charcoal, alumina, clay, alumino-silicate and/or silicate. Feedstock temp. is pref. held at 40-140 deg.C so that support water content is 1-25 wt.%. Feedstock with 20-300 ppm mercaptans is pref. treated at 40-120 deg.C, and with 300-3000 ppm at 50-140 deg.C.

ADVANTAGE - Does not require the use of an anhydrous inorganic or organic base or of a desiccant mixed with the support, not periodic drying of the support using a solvent. @(7pp)@

CHOSEN-DRAWING: Dwg.0/1 Dwg.0/1

TITLE-TERMS: SWEET PETROL CUT CATALYST OXIDATION FIX BED

DERWENT-CLASS: H04

CPI-CODES: H04-A01;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1991-032007